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Food Deserts: Low Income Communities and their Lack of Adequate Nutrition

Submitted by Lauren M. Harding
May 2012

MSW Clinical Research Paper

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present their findings. This project is neither a Master's thesis nor a dissertation.

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Abstract

Food deserts are urban as well as rural areas where a quality amount of adequate nutritional food is hard to come by. In many instances, people may live within a few blocks of fast food restaurants, but in order to get to a grocery store they may have to travel many miles. The people who live within these food deserts are often considered low income and are ethnically minorities. This research project is a qualitative exploratory study that analyses the relationship between people living in low income food desert communities with their lack of nutritionally affordable food options. One of the goals of the research project was to discover how the population living in these low income communities feels about their opportunities to obtain healthy food. A theoretical framework of content analysis was used as the method to construct and interpret themes found throughout the analysis. Eight in-depth interviews were conducted with low income community members, male and female, who were 18 years or older. Data analysis occurred within one month of conducting the interviews. The core themes that emerged in the data were: 1) characteristics of participants; 2) impact on children; 3) consequences of living in a food desert; and, 4) solutions to food deserts. The social work profession has paid little attention to this area of concern. Food deserts are made up of primary low income level populations, which is a major area of social work practice. It is important that the social work profession researches this topic more in depth and become more knowledgeable on how food deserts affect their clients.

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Food Deserts: Low Income Communities and their Lack of Adequate Nutrition

Throughout the U.S. there are many urban as well as rural areas where the amount of adequate nutritional food is hard to come by. In many instances people may live within a few blocks of fast food restaurants, but in order to get to a grocery store they may have to travel many miles. Because the healthier options are further away people have to rely on transportation, whether it be their own gas or paying to use public transit. Either way, it is harder for inner city as well as rural population to easily obtain nutritious options. This lack of nutritious food is often referred to as a food desert. The people who live within these food deserts are often times poorer as well as minorities (Marty, 2010). The problem that will be examined throughout this literature review is that poorer and minority populations have a lack of adequate nutrition, which leads to more physical and mental health problems.

In 2010, approximately one-third of American adults were considered obese. In addition, 17% of American children were also considered obese (Center for Disease Control, 2011). With the extensive choices of fast food restaurants and the lack of nutritional options, these food desert communities will frequently have higher rates of obesity. A study conducted by the Department of Health at the University of Minnesota found that better access to supermarkets decreased the risk of obesity; however an increase in access to convenient stores increased the risk of obesity (Larson, Story, & Nelson, 2009). Convenient stores may carry healthier options, however these options are usually higher priced, in comparison to the already prepared higher calorie food options, which are much cheaper

(Larson, Story, & Nelson, 2009). If convenient stores are within a closer proximity to where people live, there is a higher chance that people will shop there more often. With healthier options being higher priced, many people will choose the less healthy more calorie options in order to save money. Poor nutrition not only leads to physical problems, but mental health problems may also arise. Research conducted at the University of Chicago found a gene that links food and behavior. The behaviors this study mostly focused on were irritability, anxiety and depression (Food-mood Link is Reported, 1985). A study published in the British Journal of Psychiatry found that there is a correlation between the amount of sugar a person digests and the severity of a person's depression. Also found in the study was a correlation between the amounts of sugar a person digests and the higher number of negative outcomes in schizophrenic diagnoses (Peet, 2004). It has been found that a diet lifestyle that offers a variety of different nutrients including those found in fruits, vegetables, fish, and whole grains improve cognition, and will often times reduce the instance of cognitive related illnesses; such as Alzheimer's Disease (Ferraro, 1998).

Research studies conducted, have examined the economic, and ethnic make up of people living in food deserts (United States Department of Agriculture, 2009). Along with population make up, there has been extensive research conducted on people who lack nutritional food options and the effect it has on their physical and mental health (Food-mood Link is Reported, 1985) & (United States Department of Agriculture, 2009). Most of the research looks at this problem from an outsider's perspective. The research conducted in this thesis

will answer the following question: what are the experiences and beliefs of people who live in poorer neighborhoods, on healthy food, and how it affects them? This problem is important to the social work profession because social workers advocate for people who are poor, and lack resources, which is the main population of food desert communities. Also, healthy food options help people mentally and physically. Clinical social workers work with people who may suffer from mental or physical problems and helping them find adequate nutrition may help their problem.

Literature Review

The House of Representatives 2008 Farm Bill defines food deserts as “an area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower-income neighborhoods and communities” (H.R. Res. 2419). The House of Representatives created a section within the 2008 Farm Bill for the United States Department of Agriculture to investigate the impact of food deserts on the American population. This report helped Americans see the severity of food deserts on certain populations (United States Department of Agriculture, 2009). The idea of food deserts has been around for many years; however, the phrase food desert wasn’t coined until the 1990’s in the United Kingdom (Siemering, 2011). The notion of food deserts was brought up when the number of big supermarkets started growing in the suburbs, which left smaller family owned grocery stores in rural and urban areas suffering from lack of customers. Due to many zoning laws, as well as lack of adequate space, only small quick stop shops

were able to locate in urban areas. As for rural areas, many small family owned grocery stores could not compete with the variety of options the large supermarkets provided (National Research Council, 2009).

Throughout this literature review there will be several areas that will be reviewed. First, the effected populations, which mostly involves lower income levels as well as minority populations. Secondly, the consequences of living within a food desert, mental and physical health problems, and possible financial issues. Thirdly, what the experts are looking at to possibly alleviate food deserts. Finally, the number of different policies related to this issue, and current actions being conducted on a more macro level.

Population Effected

Income level. Several studies examine the income level and how that affects a person's choice of food. One study in Minnesota examined food costs in poorer neighborhoods compared to more affluent neighborhoods, and what the community member thought about the price and choices that were offered in their local stores (Hendrickson, Smith, & Eikenberry, 2006). Findings indicate that poorer communities, whether urban or rural, the community members felt that they lacked options, and the choices that were offered were often not high quality. Many members of the community that participated shared their distress because they often had to travel out of their neighborhoods to get high quality essential food items, such as bread and milk. The researchers in this study also compared the price and quality of food that was offered in poorer communities, to that of suburban communities that had big super markets. Often, the poorer communities

had to pay more for good nutritional food, compared to their wealthier counterparts (Hendrickson et al., 2006).

Poorer populations are often the ones most affected by food deserts, due to their lack of transportation to attain healthy food choices; they might have to settle with a fast food that is usually much closer to their home. Many low income community members may have to take public transit to get around, many may have multiple children that they cannot leave unattended while they travel to the grocery store, and once they get there they may not have enough money to actually purchase the often higher priced health food options (Associated Press, 2004). There is direct correlation between lack of food options and low-income levels, which may lead to health problems. Due to their lack of nutritional food a person can develop health issues, such as diabetes, which will then cause that person to pay for medication to manage their diabetes. This extra expense from the medication will then in turn make that person have less money to spend on healthy food choices, which could make them healthier. The entire cycle just continues, and often will put their children in the same cycle as they grow up (Kenner, 2008).

Ethnic background. After World War II, minority populations living in rural areas in the U.S. started to move to urban cities. During this time, much of the white population was moving out of the inner city and into the suburbs. This moving made for a split in the white populations vs. the minority populations. Many of the cities started to become crowded due to the large amounts of people moving towards the inner cities (Seitles, 1996). Reviewing the history of how the

people living in urban communities presently became ethnically diverse is important when looking at how food deserts encompass the same ethnically diverse populations. It appears that due to the high numbers of people moving into the cities, many of the super markets of today were unable to put up their large stores because of lack of space. The suburbs were the closest many of the major super markets could begin to establish themselves in near by cities. History has shown us the suburbs consist mostly of white Americans due to the migration of that population (Morland, Wing, Diez Roux, & Poole, 2002).

A study completed by Morland et al. (2002), found that supermarkets, which had a larger, healthier variety of food, was most often found in wealthy white communities. Where as in poorer black communities had only small corner grocery stores, which often offered a small and higher priced number of healthy options. This disparity between the majority (white) population and the minority population was also discussed in research study conducted by Augusta State University located in Georgia. The researchers found that grocery stores located in urban areas had higher priced lower value food choices. It was found that grocery stores in higher end communities will often have more money to draw in better managers and staff. Thus the circle of higher quality continues, the higher end store will continue to attract higher end customers because their stores are filled with better sales people, and better looking stores in general. Smaller less wealthy stores cannot compete with the high-end large super stores (Topolski, Boyd-Bowman, & Furguson, 2003).

African American. It has been shown in research that African American

neighborhoods are often times included in the food desert area. These neighborhoods are often times the furthest from healthy food options, and the closest to fast food restaurants. It is difficult to understand why there has been such inequality in racial segregation between African American communities and non-African American communities. African American women have shown to be at the highest number of all other ethnic and racial groups to be obese, 53.9 percent (Odoms-Young, Zenk, & Mason, 2009). Research completed in the Journal of Public Health found, that African American neighborhoods have the lowest number of fruit and vegetable markets, but higher numbers of fish and meat markets. African American neighborhoods also had some of the highest numbers of small convenient stores, compared to predominantly white neighborhoods who had the highest number of supermarkets (Moore, Diez Roux, & Brines, 2008).

Children. The obesity rate for school aged children continues to grow. Eating habits are learned through seeing and experiencing what is done in the home. Schools are now trying to intervene with this childhood obesity epidemic. The education system is trying to eliminate unhealthy food options from lunch lines, and vending machines and provide children with healthier options. However in the current economic times, many poorer community schools have a lack of financial opportunities and will often have cuts of up to 10 percent higher than that of wealthier schools. This often leads to poorer nutritional, and after school activity options for the children (Dobeneck, 2011).

When a child does not receive adequate nutrition it can often lead to poor

academic outcomes. Poor nutrition has been linked to poor academic standings as well as test scores. Many children do not obtain enough vitamins and minerals with the high fat food they ingest every day. Low levels of iron can be linked to poor attention spans and exhaustion. Along with poor community schools cutting back to healthy food options, many schools also cut certain classes and after school activities (Action for Healthy Kids, 2003.)

Consequences of Living in a Food Desert

Physical issues. The U.S. Department of Agriculture (2009) found that the problem may not only be that people are not having the option to eat nutritiously, but that they have too many bad food options. Researchers found that there has been a small decrease in body mass index when people are given healthy food, however if people have many options to eat poorly, their body mass index does not change that much. This finding indicates that food deserts are part of the problem, but even if more healthy options are presented, people have still grown up eating poor nutritious options and will likely not change their habits. The Institute of Medicine and the National Research Council (2009) found similar facts found by the U.S. Department of Agriculture. Researchers found that just increasing eating healthy food will not lower a person's weight. People have to cut back the bad food in order to see a difference. Lack of nutritional food option may not be the only factor in causing physical problems for individuals, however a person will not be able to make different food choices if there is not an opportunity to change.

A persons diet is known to have an effect on a persons weight, however there

is also research linking a persons diet to cardiovascular disease and cancer.

Researchers examined the link between these illnesses and poor diet. It was found that poor diets often include high saturated fat, and carbohydrates. High numbers of both of these have been shown to increase a person's chance of having cancer and cardiovascular problems. In comparison, when the increase of fruits, vegetables, and whole grains were introduced to their diets, the chances of cancer and cardiovascular problems decrease (National Research Council, 2009).

Mental issues. Mental health issues are a major concern in the U.S. Often times mental health is directly related to the genetic makeup of a person, and there is not a way to change how a person is affected. One research study however, examined the brain makeup and compared it to a persons diet. In this study it was found that because the brain is made up of mostly fats, the more fat food choices a person makes influences a persons thoughts and mood. Foods high in fat cause the brain to become inflamed. This inflammation of the brain has been linked to depression, Alzheimer's, and even schizophrenia. This research also found that food such as fruits, fish, and vegetables help against the inflammation of the brain, and therefore reduce the risk of mental illness (Senior, 2008). The Philadelphia Tribune published an article that pointed out the relationship between not healthy food and mental illness. The authors stated that many non-healthy food options contain a number of different additives and food chemicals, to keep the food from spoiling. However these additives and chemicals are not natural and therefore cause effects on the body and brain. These additives and chemicals have been linked to anxiety, depression and an overall crankiness due

to the effects these products have on the brain (Ellis, 2006).

Diet helps reduce the negative symptoms of mental illnesses, however once a person is diagnosed with a mental illness the food that is digested plays a major role as well. The Glenwood Inc. Behavioral Health Center works with individuals and families who are diagnosed with autism. Researchers found that eating a variety of nutritious food can help reduce some of the serve symptoms (Green, 2006). It has also been found that a proper nutritional diet can help children and adults who suffer from ADHD, focus and become less intense. The dyes and additives that increase the risk of mental illness have also been linked to making ADHD more sever (Wells, 2004). In a study conducted by the Center of Science in the Public Interest, researchers found that a combination of ADHD prescribed medication and a change to nutritional food may equal a need for a smaller dosage of ADHD prescribed medication (Jacobson & Schardt, 1999).

Financial issues. The total cost of health related expenses due to obesity is over 99 million dollars (Black & Macinko, 2008). Healthy food options can often be the more expensive choices. For people who are unable to afford the higher prices, they will often settle for low price, which often times contain high fat content choices. Another trend low-income individuals and families participate in is buying in bulk (Squires, 2007). By purchasing groceries in bulk they have the opportunity to get everything at one time, and spend less time returning to the grocery store multiple times. This may seem like a good idea when purchasing in bulk, but overall it has its negative effects. When buying in bulk there are only certain types of food one can purchase. Usually food bought in bulk has more

preservatives and chemicals in order to keep the food fresh and longer (Squires, 2007). Referring back to the mental health problems section, these preservatives and chemicals have been linked to anxiety and depression (Ellis, 2006).

Many residents of food desert areas rely on food stamps for their weekly grocery store visits. In many cases food stamps provide people with an average of \$21.00 dollars per week to buy groceries. Living on approximately \$21.00 dollars per week for healthy groceries is very difficult (Squires, 2007). Many times people will purchase food that is filling and cheap. In most cases, these filling and cheap food choices are full of fat and carbohydrates. It may take time and research to find healthy affordable options and many families who live in poverty do not have the time to research healthy food options and affordable stores to purchase these healthy items (Squires, 2007).

Food Desert Responses

Urban gardens. One major response to food deserts includes urban gardens. Urban gardens are often times thought of as small plots of land on balconies or rooftops of tall skyscraper apartment buildings. However, urban gardens can provide families with substantial amounts of fresh produce, that they are able to grow themselves. Research has found that the sooner the produce is picked and consumed the higher nutrient value that food will provide. It has been found that waiting for produce to be picked, shipped, and bought at a supermarket can decrease the nutrient value of produce by approximately 40 percent (Bellows, Brown, & Smit, 2004). Urban gardens are a better option to grow personal quantities of fresh produce because it costs less. Nevertheless, many states within

the U.S. have harsh cold winters, or scorching hot summers. Unless people have the option of having an enclosed space to grow year round, this idea is not a sustainable option for most Americans.

Mobil supermarkets. Many faith-based organizations have become highly involved in providing healthy options to low income communities. With funding from faith-based organizations, large vehicles have been bought and used to take fresh produce to the people of food desert communities (United States Domestic Policy Council, 2011). In other areas of the U.S. community members have been helping those less fortunate by renting out busses and turning them into portable grocery stores (Eversley, 2011). These options allow community members to assist low-income individuals and families with healthy food options. It is important to examine the impact of adequate nutritional meals and what they can provide to the body and mind.

Farmers markets. The 1980's in the U.S. brought a new idea to the forefront. Community Supported Agriculture (CSA) is the idea that people can visit local farms for their fresh produce. CSA organizations often also participate in local farmers markets in order to provide fresh food closer to home. This organization started to recognize the importance of bringing local healthy food to the public. People started seeing the importance of bringing farmers to the cities, which in turn would create jobs in rural areas, and provide healthy options to urban areas (Winne, 2008).

Farmers markets are a great source for urban food desert communities to receive fresh fruits and vegetables. In many instances a local farmers market may

be the only option communities have to purchase health food options. However, due to the inner city location and certain city codes, assemblage of a farmers market can often times be too expensive for the city to endorse. Unless an outside source is willing to fund the inner city farmers market, many times these areas go without (Patrignani, 2006). Many farmers markets are engaging in the federally funded programs in order to provide food to people using WIC and EBT (Patrignani, 2006).

Food Related Policies

Food related policies are often times an important part of a legislative session. Working towards a movement that empowers people to have a choice on health nutrition food is often times highly supported by not only legislators, but also by the voting citizens as well. Providing healthy food in children's schools, as well as promoting healthy and sustainable food choices is an issue voters will likely vote on during election time. However the issue arises when legislation brings up food stamp legislation. Often times low-income individuals may not have the loudest voice when it comes to legislation (Winne, 2008)

Let's move. The first lady Michelle Obama, first brought awareness to childhood obesity, by initiated the let's move campaign. President Barack Obama formed a task force to help provide awareness and support to this cause. This task force created a report, which supplied the President and Americans the opportunity to see the recommendations of what should be done in order to combat childhood obesity. This report provides information regarding early childhood development, how to empower parents and caregivers, trying to get

healthy food in the schools, increasing a child's physical activity, and finally how to make access to healthy food more obtainable. The section concerning access to healthy food focuses on low income families who lack the convenience of obtaining fresh healthy food for themselves and their children. This movement aims towards educating families, schools, and government officials; on the impact of childhood obesity. Let's move is a way to provide tools to individuals who may not know where to start looking for help (United States Department of Labor, 2008).

The report discusses the term food desert and the effect they have on the communities that live within them. The U.S. Department of Agriculture estimated that about 23.5 million people live in low-income communities that are located at least one mile away from a supermarket (United States Domestic Policy Council, 2011). In relation to this one mile distance, of these individuals and families about one million do not have access to a car. This limited access to supermarkets causes a lack of nutritionally satisfying foods. The individuals and families who live in these areas will often purchase food that is close and inexpensive. These choices are usually fast food or packaged foods from convenient stores. Children who grew up with these eating choices tend to mirror their parents behavior and it is difficult to change. The Let's Move campaign also focuses on trying to educate the parents and guardians of these children in order to change the future of the children. The education of the parents' focuses on becoming aware of the foods, vitamins and minerals the body needs in order to function correctly (United States Domestic Policy Council, 2011).

This report also provides helpful and useful suggestions on how to overcome food deserts. The report discusses that there is not one solution to fix the food desert problem. However the report discusses the need to educate the communities, as well as bringing healthy food to the communities. The issue with many food desert communities is that the individuals and families eat what is nearby and inexpensive. If this need is addressed by providing inexpensive healthy food options into the communities, it will assist in reducing food desert communities (United States Domestic Policy Council, 2011).

Another issue the report discusses is that of getting children, individuals and families more motivated to be active. The average amount of physical activity a child should be getting daily is 60 minute of moderate to vigorous cardiovascular work, muscle strengthening, and bone strengthening. Cardiovascular exercise consists of getting the heart rate up, muscle strengthening involves getting muscles working and muscle mass increased, and finally bone strengthening involves any physical activity such as playing basketball or volleyball (United States Domestic Policy Council, 2011). The researchers recognize the importance of educating children, individuals, and families about activity and how it can affect individuals' entire life. This solution often starts at a child's school and they bring these concepts home. In order for children to learn about exercise and physical activity, schools need to be informed, and offer more opportunities for children to get daily exposure to physical activity. Parents' whose children are actively involved in activities have an easier time helping them change their lifestyle (United States Domestic Policy Council, 2011).

Farmers market policy. There are several federal U.S. policies concerning farmers markets. The first involves the farmers themselves and how they are provided funding to continue to provide fresh locally grown produce for consumers. The Farmers Market Promotion Program is provided money from the federal government to support programs that provide direct farmer to consumer food goods. This policy helps insure that farmers will be able to continue to provide healthy produce options to local communities (United States Department of Agriculture, 2011).

The second policy concerning farmers markets, also works with low-income senior citizens that can exchange coupons for healthy food options at local farmers markets. The Senior Farmers' Market Nutrition Program is a federally funded grant program that provides money to states, U.S. territories, and Indian tribal governments. Money that is provided to these entities they in turn provide senior citizens who live in low-income households coupons, which they can use to buy fresh healthy groceries (United States Department of Agriculture, Senior Farmers' Market Nutrition Program)

Finally, the Women, Infants, and Children (WIC) Farmers' Market Nutrition Program provides services. This program is similar to the Senior Farmers' Market Nutrition Program. The federal government provides funds to different entities, which in turn provide WIC coupons that can be used at farmers markets. WIC participants are given their normal coupons, which can be used at any regular shopping market, and in addition separate WIC coupons, which can be used at farmers markets to purchase fresh healthy groceries for themselves and their

children (United States Department of Agriculture, WIC Farmers' Market Nutrition Program).

Community Food Security Coalition is a national organization that helps provide service to low-income communities and farmers (Alkon, 2007). This organization focuses on the farmers who are producing healthy produce, but may not be able to keep up with the larger companies that also sell healthy produce. Despite the fact that urban food deserts seem to gain more attention; rural food deserts are also a major problem. Often, people who live in rural areas of the county have greater difficulty accessing nutritionally health food choices. In many rural communities public transportation is not an option, if a person lives out in the county they will need to drive many miles to purchase food. The Community Food Security Coalition provides help to those low-income communities (Alkon, 2007).

Healthy school food. President Barack Obama signed the Healthy Hunger-Free Kids Act of 2010 into law on December 13, 2010. This act provides support to schools in order for them to provide healthier food options as well as support to school related wellness activities. This act requires schools to look at their current food nutrition standards and raise it up to the healthy daily requirements children must have in order to maintain healthy living. In a report conducted by the Public Health Law Center, it was noted that “nearly 32 million children participate in school meal program every school day”. This statistic demonstrates how vital it is to provide school aged children with adequate nutrition. With the high number of American school children relying on their

schools to provide a nutritionally healthy meal, it is essential that the schools offer that option. Many children may also rely on their school to provide them breakfast as well as a lunch. The Healthy Hunger-Free Kids Act has taken into account that breakfast is the most important meal of the day, and created a provision. This act increases school breakfast program by providing healthier options, in order for the children will be able to function successfully throughout the day (Public Health Law Center, 2011).

Many schools that serve low-income communities may have the difficulty of providing adequate school meals, and/or school physical activities. However, with this law in place the federal government has taken notice on the importance of every child receiving healthy food options, and providing their schools with resources (Public Health Law Center, 2011).

Social Work Role

The food desert idea emerged in the field of sociology and psychology. However, when looked at closer, social work as a profession should have interest in and focus on food deserts. Low-income communities are communities in which social workers focus much of their attention on. However when researched through a social work search engine little was found on the topic. This issue involves social justice, and community practice skills, both of which are highly focused on in the social work community (Jacobson, 2007). This community-focused approach is taught through the generalist education of social workers, however if one starts looking toward the micro level, it can be seen that a clinical social work focus is needed. Clinicians in practice work with clients who have

multiple problems. Often times in order to help a client move successfully through therapy the mental and physical issues must be addressed first. Clinical social workers have the ability to see clients one on one; this gives them the opportunity to address mental, physical, and nutritional issues more in depth.

One area the social work profession has become focused on is the lack of nutritionally healthy food that is offered to children within schools. The National Association of Social Workers has created a task force in order to assist in the development of healthy food programs in schools. This task force focuses on what is the problem and what are some possible solutions. They address the importance of providing healthier food as well as providing better physical education classes, and after school activities. The task force also discusses the importance of looking at affordable options for communities in order for children to be successful not only in school but in their homes as well (National Association of Social Workers, 2009).

Conclusion

A food desert is defined as “an area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower-income neighborhoods and communities” (H.R. Res. 2419). The Center for Disease Control (2011) reported that approximately one-third of American adults are considered obese, and about 17% of children are considered obese. Much of this epidemic can be traced to a person’s choice of diet. The issue arises when diet is no longer a choice for people, instead they eat what they can find and afford. Due to the emergent end results that have been shown by living in

food deserts, the food desert idea has become more focused on by the public. This literature review discussed the results of a lack of adequate nutritional food; physical health issues, mental health issues, and financial issues. The food desert problem is an important issue for social workers due to the majority of people who are affected by food deserts. Social workers advocate for people who are poor, and lack resources, which is the main population of food desert communities. Clinical social workers work with people who may suffer from mental or physical problems and helping them find adequate nutrition may help their overall problem.

Conceptual Framework

This researcher views the problem of food deserts as an ecological theoretical problem. The ecological theory is a part of the sociological theory. Ecological theory views a person's environment as an important factor in their welfare. The theory states that "the way people perceive their environments and experiences significantly affects their well being" (Rogers, 2006, 35). Diving deeper into the structure of this theory it is often broken down into a person's systems makeup. There are four different levels within the ecological theory that makeup a person's environment. The mircosystem within the ecological theory focuses on a persons direct environment. This includes a person's home, neighborhood, school and work place. The mesosystem concentrates on the interaction between multiple microsystems, for example the interaction between a person's home life and their school life. The next system is the exosystem, which concentrates on the social settings in which people interact, and ultimately will

have some effect on the person. An example of this would be a child's school, or a community center within the community. Finally, the macrosystem, includes the larger factors such as the law, politics, and cultural beliefs. The macrosystems within a person's life can affect them forever. An example of macrosystems could be a schools policy on the need for gym class. Many schools have made taking a gym class an elective because of financial cut backs from the government (Rogers, 2006).

Since the ecological theory views a person's environment as an important factor in their welfare, the idea of food deserts fits perfectly within the environmental aspect. A food desert is often a person's direct environment and therefore will effect other areas of a person's life. The mesosystems portion of the ecological theory describes the interaction between multiple environments that effect a person. Once one environment is in disarray, the ecological theory states that other environments will become effected (Rogers, 2006).

This research views the ecological theory as an important factor when looking at food deserts, and assist in the understanding of the food desert problem. Even though a food desert is an environment in which a person lives in, other factors that coincide with the food desert can also be viewed from the ecological factor. The example given earlier in this section, where a schools policy on gym class was discussed is an important example of the ecological theory. Another example of public policy effecting peoples lives is that school policies pertaining to school lunch programs. Many school districts have policy on how many servings of certain food group's children should be receiving. However, the serving sizes of

food groups do not discuss what food is nutritionally healthy, and which are just empty calories. For example, school lunches should provide children with a certain number of vegetable servings, however there is no policy regulating what vegetable is served, and since potatoes are vegetables, it can be said a french fry could be considered a vegetable serving. This lack of policy will ultimately affect the child's overall nutritional state as well as their outlook on healthy nutrition. The ecological theory helps support the notion that the food desert problem is a problem that includes many systems within a person's life, and in order to combat the problem the multi-system problem there needs to be interventions along every level (Rogers, 2006). The conceptual framework for this research study is important to understand. This knowledge will help better understand the design structure for the methodology section.

Methodology

Research Design

This researcher specifically explored the impact food deserts have on individuals living within the community. In order to discover how individual community members experience the effects of a food desert, a qualitative research study was conducted. Qualitative research focuses on personal experiences and in turn finds common links between different interview participants in order to better understand the question, which was being explore for research (Monette, Sullivan & DeJong , 2011).

This researcher used a qualitative design in order to gain an understanding of how a number of different individuals who live within food deserts have

similar, and contradictory beliefs and opinions about life in a food desert. Qualitative questions were asked to the research participants; in order to gain what their individual thoughts are about food desert life, and what they felt was important information to know about their nutritional life. Once that data was collected from eight participants, the data was reviewed, coded, and finally compared and contrasted with the other research participants.

Sample Population

In this research project this researcher interviewed eight individuals who reside in a food desert community. Fliers were dispersed to two different social service agencies located within different food deserts located around the a large metropolitan city for recruitment purposes [see appendix A]. This researcher provided each of the agencies with a flier, in which, they in turn posted in their agency for individuals to see and chose to participate in this research project [see appendix D]. The flier included this researcher's phone number for individuals to contact her about participation.

Once the participants contacted this researcher, this researcher told the individual more about the study and answered any additional questions they may have had. If the individual was still interested in participating this researcher immediately set up an interview [see Appendix E].

The research participants were randomly selected based on their first contact with this researcher. The population of individuals who were allowed to participate in this research study included anyone who was 18 years of age or older, and lived in a food desert or low income level community. In order to gain

higher numbers of participants this researcher provided the incentive a ten dollar gift card to a grocery store of their choice, if they participated in the interview.

Protection of Human Subjects

The participants in this study were protected under confidentiality standards. Each participant was provided a consent form [see Appendix B], which provided information regarding this study and any risks and benefits from participating in the project. This form also provided each participant with an in depth explanation of their right to confidentiality and measures were put in place to make sure participants understood the study. This form was distributed to the participants immediately before the interview. This form was given and asked to be read by the participant. If the participants requested this researcher to read the form out loud, this researcher did so. After the form had been read, this researcher requested the participants to sign the form [see Appendix B]. After the interview was complete this researcher provided the participants with a resource sheet in case they felt they needed additional resources for obtaining healthy food [see Appendix F].

The interviews were audio recorded in order for this researcher to accurately recount the information gathered by each participant. The participants were asked if they would allow the interview to be recorded. If the participant did not allow it they were still interviewed, and this researcher took notes. Once the interview was complete this researcher analyzed the audiotapes and transcribed them. These written transcriptions were accessible to this researcher and the researcher's supervisor. These transcriptions were locked in this researcher's computer, and

immediately destroyed when the research project was complete on May 2012. The audiotapes were also locked in a desk within this researcher's office. The audiotapes were accessible by this researcher and the researcher's supervisor. The audiotapes were destroyed as soon as this project was complete on May 2012.

Data Collection/Data Analysis

The data collection tool that was used in this research was a set of ten interview questions [see Appendix C]. These questions were focused on the participant's identification of their race/ethnicity, their income level, and their thoughts and opinions on affordable, and attainable nutritional food options. Each interview was approximately 45 minutes in length and was completed in a one-time session. The interview participants choose the location of the interview. The interview was audio recorded in order for this researcher to accurately recount the participant's answers. Once the interview was complete this researcher listened to the audio recordings and transcribed them word for word. After transcription was complete this researcher analyzed the data found.

The data analysis technique that was used to examine the interview was content analysis. Content analysis is a technique used to find similarities in the transcript, and create codes in order to better understand the findings (Berg, 2008). This researcher used conventional content analysis, which means constructing codes based on information attained in the literature findings (Berg, 2008). This researcher took information from the literature review as well as the transcript to form codes. These codes were used to obtain a better understanding of the information that was given to her by the interviewed participants.

Strengths and Limitations

The strengths of this study included gaining knowledge on how the population who live in food deserts experience nutritional healthy food. Much of the literature focused on statistics and outsiders looking in. There was limited information on how the individual population feels towards this issue. This researcher was able to gain an inside perspective of the thoughts and beliefs surrounding this global issue. Another strength of this study was that this researcher was exploring the experiences of a vulnerable population. Social Work as a profession is interested in this population due to social work values and the social work code of ethics.

A limitation that arose throughout this research process was the lack of diversity in participants. This researcher was relying on participants to come forward to participate. There were a high number of participants that identified themselves as African American. Only one participant identified himself or herself as Mexican American, and no participants identified themselves as white or Asian American. Another limitation of this research was the location in which participants were found. This researcher was only recruiting participants from a large metropolitan city and surrounding suburbs. This research shows generalized opinions of a large metropolitan city, and lacks information from a diversity of populations.

Findings

The following section presents the participants responses to the interview questions. The responses were analyzed and coded based on the questions asked.

The interview questions were designed to acquire responses about what participants' thoughts and beliefs were about healthy food and how it impacts their lives. Throughout this section this researcher will discuss the following themes; (a) characteristics of the participants, (b) the impact on children, (c) the consequences of living in a food desert, and (d) the solutions to food deserts. This researcher gave each participant's a letter as the name in order to protect their confidentiality.

Characteristics of participants

Low income level. The literature concerning food deserts focuses on low income level of a population (i.e., 0- \$35,000 annually). This research study focused on participants who made an annual income between those guidelines. The flyer that was placed at community agencies had the guidelines of income level for participants. The first question in this interview was to gain the information of how much the participant made annually. The question was worded in annual income ranges, the participants were not asked to give a single number for income, but instead to give a range for annual household income. Four of the eight participant's annual household income was between \$11,000-\$12,000. Three participants annual income level was in the range higher than \$20,000, and one participant's annual household income level was lower than \$11,000. All eight of the participants identified that they fell within the range of low income, which is below \$35,000 annually.

Participant's culture. Several participants who volunteered to participate in this research study lived within the inner city of a large metropolitan

city. Seven of the eight participants identified themselves as African American, and one participant identified themselves as Mexican American. This research did not have any participants who identified as white or Asian American. The participants of this research study were divided equally between male and female, four males and four females. The attitudes of healthy food did not differ between males and females.

Personal background. It was found that the different attitudes about healthy food relied on participant's upbringings, as well as current health status. Participant A had been diagnosed with diabetes, since the diagnoses he and his family had started eating healthy nutritious choices. "I'm also diabetic so I've had to stay away from carbs and that stuff, and I try the best I can to stay on diet and take my medications." A majority of the participants stated that the African American culture has had problems in the past with foods high in salt and grease. Participant D stated:

African Americans especially in this country and this community, umm, have traditionally eaten a lot of salt, and a lot of fat foods. You hear a lot of soul food and collard greens and bar-b-que, a lot of fried chicken, and corn bread.

Throughout the interview process, the African American participants often stated their flavors for food were different than that of white culture. Participant F stated, "we season our food, and white people don't season their food the way we do". The types of food as well as seasoning that accompany food choices obviously play a role in overall health.

Impact on children

Insufficient school food programs. One theme that was recurrent throughout this research for the participants, who had children, was that school lunch programs are not as healthy as people would like them to be. Participant C stated:

They give them one orange as a nutritional option ya know and milk, its not gonna cut it. I think they should, I don't know I think they should do a little more research. The kids are not eating the food, what's the point of having a lunch program if the kids aren't eating.

Participant G reported that it is not only the schools that are to blame, but also the children's entire surroundings. He reported, "The options they have in school combined with what's going on at home combined with what's going on in free time contribute to unhealthy diets". The five participants who had children in school, identified that even though the schools do not help the childhood obesity problem, children's home lives also contribute to the obesity problem. In order to change the future of the children, a change has to occur throughout the entire family. Participant E, also stated "when my wife has the kids she is able to provide them with more variety of food, its just cheaper and easier to get when your not in the inner city." Participant E expressed frustration with not being able to provide the same nutritional options as other people due to his living location. He stated, " my kids don't go to school around here, they're lucky, the school they go to is nice and can give them the healthy things they need." Participant E

reported on the problems of the different schools and that often inner city schools lack equal financial resources of the suburban schools. He stated:

In the suburbs there are a lot of better off families that will provide for their kids schools, in the city its not like that, we send our kids to school with what ever the school can provide. Now if my kid could go to a private school it would obviously be different.

Home versus school prices. While most of the participants whom had children that still attended grade school identified that school food programs were not healthy, and helped greater the number of childhood obesity problems, one participant disagreed. Participant F stated, “school food is more healthy than ya know, coming up with it at home”. He explained:

When my children eat at school, they have to feed them healthy options. The school can’t let them starve. And when I gotta feed them at home it costs me a lot and I can’t afford a lot of healthy things.

Participant F reported that having his children eating at school helped him financially; he was not able to provide health food choices for his children at home due to financial constrictions.

The dilemma of prices for healthy food was a major topic of discussion throughout all eight interviews, however most of the participants had found ways to deal with economic shortcomings. Participant B had recently started using coupons, and would strategically buy groceries based on the types and amounts of coupons she had. She stated:

Some weeks my kids won't have their favorite snacks for lunch cause that week their favorite didn't have a coupon.... its hard to send my kids to school when I know some of their friends moms have the ability to buy their kids certain foods and I cant.

The participant reported that her children were aware of the challenges of buying healthy food, she stated, "Well my kids know that we have limited money, but to what extent I don't really know." Of the five participants who had children in school, participant B was the only participant who discussed her children's thoughts and beliefs about the problem. Throughout each interview, whether the participant had children or not, it was a recurrent theme that the household food for the week consisted of what was the cheapest.

Consequences of living in a food desert

Distance from healthy food. One theme that was recurrent was the distance to get to the grocery store and how that was problematic for participants. Five of the participants had either a vehicle of their own or someone in their family had one that they were able to borrow. The other three participants relied on public transportation to get around. Participant H explained, "I really enjoy shopping at Trader Joes because of the healthy food options, but because of the distance from my house it's hard to get there on a regular basis." This researcher asked about how she usually get to the grocery store she replied:

I have my own car but with gas prices as high as they are I just don't see the advantage to driving all the way out there when I have to spend money to get there and money when I'm there. I'm

really surprised I get to shop at Traders at all.

She explained that she has started only going there if it was a special occasion and all of her “stars” aligned. According to this participant, “stars” aligning meant she had extra time in her day, her children don’t have any after school activities, and she is all paid up on her expenses. The participant defended it does not happen often but when it does she makes it an outing for her and her kids, trying to teach them healthy eating habits. Five of the eight participants who owned or had access to a car reported that having a car allowed them to have more access to a wider variety of stores. When this researcher asked the three participants about their experiences with trying to get healthy food, it was common that they usually stuck to what was close and cheap. Participant C stated:

Right down the street (from my house) is a food market, it’s like a Kwik Trip, but no gas. I like to buy my food from there, it’s usually package food but thats best cause it doesn’t spoil... I really like to cook and wish I had more options but with the price of healthy food and how fast it goes bad I just don’t see the reason for me to track down the bus to take me a long ways away to get food that’s expensive and that will go bad in a couple days.

This was very common among the participants who did not have their own source of transportation. The participants who did have transportation and who were able to drive to grocery stores found it difficult to buy healthier options because they were usually more expensive compared to their unhealthy counter parts.

High prices of healthy food. One common theme when asked about

how to make neighborhoods healthier was to make the prices of food lower. Most of the participants discussed the problem of their income not being enough to supply themselves as well as their children with high amounts of healthy food.

Participant D stated:

I'm a single mom and I'm raising my kids alone. It's hard to be the one they have to depend on to give them healthy choices. My job doesn't pay that much! Its often easier to buy more bad foods then to buy a few good foods.

The majority of participants explained that when they are able to grocery shop, it is hard to pass up the cheap unhealthy food, for the expensive healthy food, especially when the healthy food is limited in quantity. Participant G stated:

...if I'm at the grocery store its not hard for me to make my decisions on what's cheapest, I have other bills and healthy food is not cheap...I have a hard time telling myself that buying healthy food is worth it, I know it will go bad before I get a chance to eat it all."

Participant E also stated:

In my house, it's just me. Buying healthier food is hard because I cook for one, and all the fresh food won't be fresh before I get to finish it... In my block I have so many choices for fast food, there are prolly around ten choices. And the closest grocery store is prolly [probably] three miles from my house. If I was buying for an entire family maybe I would take the time and energy to get

there. I like McDonalds so I'm gonna buy McDonalds. It's so much cheaper and it makes me happy cause I got more money in the end.

Each participant interviewed shared his or her own challenges and experiences with trying to get healthy food. Many of the participants shared that it was not worth their time and energy to worry about healthy food, whereas other participants shared their frustrations with trying to find easier ways to attain healthy food for themselves and their families. Whether there was frustration because they wanted to be healthy and could not, or they had given up trying to be healthy, all the participants agreed getting a variety of healthy food options was a challenge.

Solution to food deserts

Resources for the community. All eight participants stated that in order to make their neighborhoods healthier, more resources would need to be available for community members. Participant B stated, “people (i.e. community members) need to be informed a little more and have more recourses available to them. They don't know what's available and they don't look for it.” Another problem that was reported by the participants was people who live in low income communities often visit food shelves. The participants reported that often times food shelves do not offer healthy foods and healthy food supplies run out quickly. Participant H stated “food shelves are helpful for healthy options if people get there early, if not their only options would be canned fruits and veggies, and a lot of processed boxed foods, it just stores better.” Participant A discussed the issue

of no one being educated on the consequences of eating unhealthy food.

Ya know growing up I wasn't taught about healthy food, by my parents or by school, now it was a long time ago but still. I had to learn it on my own, if it weren't for diabetes I prolly [probably] wouldn't of changed my eating habits.

The third question asked to participants was asking what they thought healthy food was. Participant F's answer to this question gave the impression he had not been educated on what healthy food is, his answer was as follows, "I don't know what you call healthy food, but when I was growing up, I grew up on grease stuff, fried chicken or any kind of stuff like that." In addition, the participant reported on his favorite foods:

...whatever I have a taste for, I like fried chicken, and mac and cheese. I don't eat fruits cause I don't think their good. I didn't grow up eating that, why would I change what I eat if I know what I like and I know what I don't like?

After reviewing and coding all eight interviews this researcher found that there was only one participant who did not appear to want to change his eating habits. The remaining seven participants were either actively trying to change or wished they could but expressed frustration with not knowing how to do it within their budget. However, even though participant F did not appear to want to change his eating habits, when asked the question of how to make his neighborhood healthier he responded, "most people just don't know what to do and are stuck. I think if people knew what the options were to change they could make a decision. Most

people I know have given up on changing” Even though this participant reported difficulty trying to change his eating habits, he reported that have the resources might help people change and choose healthier options.

The findings indicated the following: Findings indicated there is a similarity in the background of the populations most effected by food deserts, there is a significant impact of children living in food desert communities, which is linked to school programs as well as home environment, the distance as well as high prices for healthy food are major consequences, and finally in order to make an impact on eradicating food deserts, more resources and education should be provided to community members.

Discussion

In this section, the researcher will discuss how this study provides significant information to the field of social work. The themes that were discussed in the finding section of this paper will be discussed and expanded upon. This research provided the perspective of people who are living within food desert communities. It examined their thoughts and opinions of healthy food options and opportunities they have to obtain healthy food. Throughout the literature, concerning food deserts, there was a lack of personal accounts of how living within a food desert affects the people in that community. The majority of the literature focused on the numbers and statistics of the populations, and how it medically and physically affects them. The purpose of this study was to look at an in-depth picture an individual’s life within a food desert.

During the data analysis phase of this research, it was found that findings were similar to the research found throughout the literature. Many of the participants discussed the issue of not having enough options in choosing healthy food in their neighborhoods. This is similar to the findings in Hendrickson, Smith, & Eikenberry (2006) study, which discussed the problem that poorer communities have to travel further to get more options, while more affluent neighborhoods have options much closer. One participant in this study even stated:

In the suburbs there are more affluent families that are able to provide for their kids schools, in the urban areas, that is often not the case. We send our kids to school with what ever the school can provide. Now if my kid could go to a private school it would obviously be different.

This provides additional information that not only community members, but schools are suffering from the lack of nutritional options, which is linked back to the location of the school.

With the lack of adequate options for nutritional food, families in this study resorted to providing their children with packed lunches. One mother expressed concern due to the fact that her children would not be able to get healthy options at school, however providing her children with lunches everyday was too expensive. The literature discusses the issue of children not receiving adequate nutritional food throughout the day, and its effects on the children's bodies. Poor nutrition has been linked to poor academic standings as well as test scores. Which leads to higher drop out rates within the food desert areas (Action

for Healthy Kids, 2003). One participant discussed the problem of children not going to school and becoming “a part of streets”, he stated, “these kids are not staying in school, they could make something of themselves”. If there are higher numbers in drop out rates resulting in part from the lack of adequate nutrition because children are not able to focus in class, it becomes a problem for the U.S. The U.S. population will experience higher numbers of people lacking education and higher percentage of people in low wage jobs.

In addition to the drop out rates of children being higher today, the percentage of childhood obesity cases are on the rise as well. Many school programs are trying to eliminate poor food choices from schools, however eating habits are primarily learned though the children’s home life (Dobeneck, 2011). Findings in this study have similar findings from previous studies, the participants in this study expressed concern about childhood weight problems and that the schools are not the only ones to fix the problem. One participant stated, “The options they have in school combined with what’s going on at home combined with what’s going on in free time contribute to unhealthy diets”. Many of the other participants in this study discussed this issue throughout their interviews. One participant, who disclosed she was a mother of two, expressed her concern with her girls growing up in an era where healthy food is not the first choice. She went into detail on how she tries to teach her children what healthy options are and why it is important.

In the literature review for this study it was found that one way the government is trying to eradicate food deserts is by providing better access to

urban gardens, as well as farmers markets. The U.S. government provided local farmers markets with funds in order to help people with food stamps and WIC be able to purchase healthy locally grown food options (United States Department of Agriculture, 2011). During this study it was discovered that farmers markets around the metropolitan area used to accept food stamps and WIC, however they have stopped. Findings in this study showed that farmers markets around the large metropolitan city had discontinued accepting WIC and food stamps. One participant used to go to the farmers market every week to pick up healthy food for her family. She expressed sadness about the fact this past year the farmers markets around her area stopped accepting food stamps. This discontinuation of accepting food stamps has not stopped her from going to the farmers market, because it is still close, but she now must budget more efficiently in order to spend her money at the farmers market.

This study examined the financial aspect of living within a food desert community, and the hardships of purchasing healthy food. Studies examined the financial hardships of buying healthy food. For example, Squires (2007) found that many residents of food desert areas rely on food stamps for their weekly grocery store visits. It often takes time and research to find healthy affordable options and many families who live in poverty do not have the time to research healthy food options and affordable stores in which to purchase these healthy items. Findings in this study were similar to current literature, one participant of this study coincided with the literature, she was very aware of her budget and how to get the best prices for the healthiest food. She shared her tactics of using

coupons, and knowing when to buy certain items at certain stores. She did clarify that the work she does is usually not easy, and takes a lot of time, however she felt it was important to do the work for her family.

A topic that came up often in the literature, but was not discussed in depth in this study was the effect on people's mental health state. Research conducted by Senior (2008), found that food such as fruits, fish, and vegetables help against the inflammation of the brain, and therefore reduce the risk of mental illness. One study discovered that the chemicals found in many processed foods have a significant effect on the body, as well as the brain (Ellis, 2006). Findings in this study showed that participants did not discuss mental health issues, nor any other issues related to human development because it is likely that participants are unaware of the impact nutrition has on the brain and its function.

Studies examined how the U.S is trying to eradicate food deserts Food related policies are often times an important part of a legislative session. Working towards a movement that empowers people to have a choice on health nutrition food is often times highly supported by not only legislators, but also by the voting citizens as well (Winne, 2008). This study focused primarily on the personal stories of people living within food deserts. It looked at community member's thoughts and beliefs on healthy food and what they believe is the best way to reduce the number of food deserts. Another study explored providing communities with healthy affordable options, as well as providing families with the motivation to become more active. However, findings in this study did not coincide with current studies in the literature. All eight of the participants believe

that the most important way to help reduce food deserts and provide healthier life styles in the food desert communities is to provide the community members with more education and resources. It is interesting that only one of the studies discussed providing more education for community members, the United States Domestic Policy Council (2011), which was created to provide information to the government about the lack of healthy food, discussed briefly the need to provide more education as well as more options for healthy foods to community members.

Due to the make up of the group of participants in this study some topics were not discussed. The participants were primarily focused on race, the financial burden and the need for more education in the communities. Mental health and governmental policies were not discussed in any of the interviews even though open ended questions on the effects of healthy food as well as questions regarding making neighborhoods healthier were asked.

Strengths and Limitations

The strengths of this study include gaining knowledge on how the population who live in food deserts experiences nutritional healthy food. Much of the literature focused on statistics and outsiders looking in. There was limited information on how the individual population feels towards this issue. This researcher was able to gain an inside perspective of the thoughts and beliefs surrounding this global issue. Another strength of this study was that this researcher was exploring the experiences of a vulnerable population. Social Work as a profession is interested in this population due to social work values and the social work code of ethics.

A limitation that arose throughout this research process was the lack of diversity in participants. This researcher was relying on participants to come forward to participate. There were a high number of participants that identified themselves as African American. Only one participant identified himself or herself as Mexican American, and no participants identified themselves as white or Asian Americans. Another limitation of this research was the location in which participants were found. This researcher was only recruiting participants from a large metropolitan city in the Midwest and surrounding suburbs. This research shows generalized opinions of a large metropolitan city in the Midwest, and lacks information from a diversity of populations.

Another limitation of this research study was a topic that was not discussed in the literature, which in turn was not looked at in the research portion. That topic was that of rural populations and food deserts. A majority of the studies focused on urban areas and how that specific population is affected by the lack of resources. If this research was allowed to go further, looking at rural areas of food deserts would be helpful in gaining a better understanding of the issue.

Implications for Social Work

Practice. The food desert idea emerged in the field of sociology and psychology. However, social work as a profession should be interested and focused on food deserts because social workers work in low-income communities with vulnerable groups of individuals. However, when a search was conducted in a social work search engine database, limited information was found on the topic. This issue involves social justice, and community practice skills, both of which

are highly focused on in the social work community (Jacobson, 2007). This community-focused approach is taught through the generalist education of social workers, however if one starts looking toward the micro level, it can be seen that a clinical social work focus is needed. Clinical social workers in practice work with clients who have multiple problems. Often times in order to help a client move successfully through therapy; the mental and physical issues must be addressed first. Clinical social workers have the ability to see clients one on one; this gives them the opportunity to address mental, physical, and nutritional issues more in depth.

Policy. One area the social work profession has become focused on is the lack of nutritionally healthy food that is offered to children within schools. The National Association of Social Workers has created a task force in order to assist in the development of healthy food programs in schools. This task force focuses on what is the problem and what are some possible solutions. The task force addresses the importance of providing healthier food as well as providing better physical education classes, and after school activities. The task force also discusses the importance of looking at affordable options for communities in order for children to be successful not only in school but in their homes as well (National Association of Social Workers, 2009).

Providing healthy food in children's schools, as well as promoting healthy and sustainable food choices is an issue voters will likely vote on during election time. However the issue arises when legislation brings up food stamp legislation. Often times low-income individuals may not have the loudest voice when it

comes to addressing issues that are being addressed in legislation (Winne, 2008). Social workers work directly with low-income individuals and according to the social work code of ethics social workers should advocate for their clients well being (National Association of Social Workers, 1999). When low income individuals are unable to speak for themselves, it is the social workers duty to support and empower them.

Research. This study helps provide information for the social work profession, by interviewing participants in low income communities. It allows the values of the social work profession to come forward. Social workers work in the field with their clients and this study provided an in-depth look into the lives of someone who could be a social worker's client. With further research, social workers will be able to acknowledge the need for more education on food deserts, and will be able to provide better services for our clients.

The findings in this study will provide future social workers with the information to deliver better services to their clients. The social work code of ethics discusses the need for social workers to promote the well being and self determination of their clients. This research study outlined the importance of educating communities on the importance of nutrition and how to access resources in order to provide their families with healthier options.

Conclusion

This research study examined the experiences of people living within food desert communities. Throughout the U.S. there are many urban as well as rural areas where the amount of adequate nutritional food is hard to come by. In many

instances people may live within a few blocks of fast food restaurants, but in order to get to a grocery store they may have to travel many miles. Because the healthier options are further away people have to rely on transportation. This lack of nutritious food is often referred to as a food desert. The people who live within these food deserts are often times poorer as well as minorities. Throughout this research study it was found that all of the participants were ethnic minorities who lived in a low income community within a large metropolitan city. After completing the data analysis this research found the following themes; (a) characteristics of the participants, (b) the impact on children, (c) the consequences of living in a food desert, and (d) the solutions to food deserts. The research that was completed in this study will provide more information to the collection of data about food deserts. This research will also allow social workers to gain a better perspective of how food deserts impact their clients, and will eventually lead to more social workers completing research in this area of study.

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APPENDIX A**Letter of Cooperation for Research Project**

Institutional Review Board
St. Catherine University
St. Paul Campus
2004 Randolph Avenue
St. Paul, MN. 55105

RE: Food Deserts: Low Income Communities and their Lack of Adequate Nutrition

Lead Investigator: Lauren Harding
Clinical Social Work Student
St. Catherine University and the University of St. Thomas
School of Social Work; Joint Program

Student Advisor and Chair of Research Project:

Dr. Catherine Marrs Fuchsel, PhD., LICSW
Assistant Professor
St. Catherine University and the University of St. Thomas
School of Social Work; Joint Program

To whom it may concern:

We have agreed to assist Lauren Harding in placing fliers in our agency in order to recruit participants for her clinical research project. Ms. Harding will be researching the opinions and attitudes of low-income community members, on that of adequate nutrition, and sustainable resources for nutritional food. We will allow Ms. Harding to place fliers up in our agency, in order for her to locate participants for this study. We will allow Ms. Harding to have one to seven participants from our agency participate in her research project.

We will allow Ms. Harding to meet one on one with people who are interested in participating in her study. We will allow Ms. Harding to meet with participants for a one time 45 minutes to one hour meeting. Ms. Harding will provide each participant her contact information, in order for the participants to contact her. Ms. Harding will provide and read to each participant a letter of consent for which the participant will then have an opportunity to sign. Ms. Harding will make it clear via the letter of consent that any information obtained during the interview will be kept confidential. Ms. Harding will make it clear to each participant via the letter of consent that the interview will be audio taped, and immediately destroyed after transcribing recording. Ms. Harding will also make it clear to each participant via the letter of consent that the transcription will

also be destroyed after project presentation on May 14, 2012. If you have any questions feel free to contact me at (XXX) XXX-XXXX.

Sincerely,

Signature and Title

Date

Print Name

Date

APPENDIX B

Food Deserts: Low Income Communities and their Lack of Adequate Nutrition RESEARCH INFORMATION AND CONSENT FORM

Introduction:

You are invited to participate in a research study investigating nutritional food options. This study is being conducted by Lauren Harding, a student in the Master's in Social Work Program under the supervision of Dr. Catherine Marrs Fuchsel, PhD., at St. Catherine University and the University of St. Thomas. You were selected as a possible participant in this research because you have identified as living in a low income community. Please read this form and ask questions before you decide whether to participate in the study.

Background Information:

The purpose of this study is to gain knowledge from individuals who live in low-income communities about their thoughts and opinions about nutritious food options. Approximately 9 people are expected to participate in this research.

Procedures:

If you decide to participate, you will be asked to participate in a 45 minute to one hour long interview in which you will be asked a series of questions which will be about nutritious food choice. This research will take place where you feel most comfortable. This interview will take approximately 45 minutes to one hour and will be complete after one session.

Risks and Benefits:

The study has minimal risks. For example, some of the questions may cause you discomfort, to answer, however if any questions causes discomfort you are free to tell the researcher and she will skip that question. At the end of the interview you will be provided a resource paper, which will have numbers to call in case you feel you need additional help with healthy food resources.

Compensation:

If you participate, you will receive a ten dollar gift card to the grocery store of your choice.

Confidentiality:

Any information obtained in connection with this research study that could identify you will be kept confidential. In any written reports or publications, no one will be identified or identifiable and only group data will be presented.

I will keep the research results in a password protected computer and a locked file cabinet in my personal office and only I and my advisor will have access to the records while we work on this project. I will finish analyzing the data by May 14, 2012. I will then destroy all original reports and identifying information that can be linked back to you. I will be using an audio recoding device in order to accurately recount the interview. This tape will only be available to my advisor, and myself. This tape will also be locked in a file cabinet in my personal office. This tape will be destroyed by May 14th, 2012.

Voluntary nature of the study:

Participation in this research study is voluntary. Your decision whether or not to participate will not affect your future relations with St. Catherine University in any way. You may refuse to answer any question if you choose. If you decide to participate, you are free to stop at any time without affecting these relationships, and no further data will be collected.

New Information:

If during course of this research study I learn about new findings that might influence your willingness to continue participating in the study, I will inform you of these findings.

Contacts and questions:

If you have any questions, please feel free to contact me, Lauren Harding at XXX-XXX-XXXX (or Dr. Catherine Marrs Fuchsel, PhD at 651-690-6146). You may ask questions now, or if you have any additional questions later, the faculty advisor, Dr. Catherine Marrs Fuchsel, PhD 651-690-6146, will be happy to answer them. If you have other questions or concerns regarding the study and would like to talk to someone other than the researcher(s), you may also contact John Schmitt, PhD, Chair of the St. Catherine University Institutional Review Board, at (651) 690-7739.

You may keep a copy of this form for your records.

Statement of Consent:

You are making a decision whether or not to participate. Your signature indicates that you have read this information and your questions have been answered. Even after signing this form, please know that you may withdraw from the study at any time and no further data will be collected.

I consent to participate in the study. (If you are video- or audio-taping your subjects, include a statement such as "and I agree to be videotaped.")

Signature of Participant

Date

Signature of Parent, Legal Guardian, or Witness
(if applicable, otherwise delete this line)

Date

Signature of Researcher

Date

APPENDIX C**Interview Questions**

1. What is your range of annual household income: \$0-\$10,000; \$11,000-\$20,000; \$21,000-30,000; \$31,000-\$35,000?
2. Which race/ethnicity do you most identify with?
3. How would you define a healthy food?
 - 3a. According to the US department of Health and Human Services healthy food is defined as eating vegetables, fruits, whole grain, fat free milk products, seafood, poultry, lean meats, eggs, beans, and nuts. Not healthy food consist of high salt and sugar content, tans fats, and saturated fats.
4. How do you think race/ethnicity effect a person's choice for healthy food?
5. Who does your household family consist of? Eg: spouse, children, other family
 - 5a. What do you think about your children's schools food program?
6. What are your experiences with trying to get healthy food for you and your family?
7. What have you noticed in your community about the options of food choices and the health of people living in the neighborhood?
8. What do you think impacts a person between eating healthy food or not eating healthy food?
9. What do you think is important for people to know to successfully get healthy food into your neighborhood?
10. What do you believe is the most important thing to make your neighborhood healthy?

Recruiting Participants for a Research Study

Interested in learning about eating habits,
grocery purchases, and thoughts on nutritional
food options

*Participants must be 18 years of age or older and should have an annual household income ranging from \$0 - \$35,000

*For participating in the interview you will be provided a \$10 gift card to the grocery store of your choice.



**This study is being conducted under the supervision
of Catherine Marrs Fuchsel, an Assistant Professor
at the University of St. Catherine**

**The researcher, Lauren Harding, is a graduate
student at the St. Catherine University and the
University of St. Thomas**

If interested please contact Lauren at XXX-XXX-XXXX

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through St. Catherine University at
(651) 690-7739

Lauren Harding
XXX-XXX-XXXX

Lauren Harding
XXX-XXX-XXXX

Lauren Harding
XXX-XXX-XXXX

Lauren Harding
XXX-XXX-XXXX

Lauren Harding
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Lauren Harding
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Lauren Harding
XXX-XXX-XXXX

Lauren Harding
XXX-XXX-XXXX

APPENDIX E

Initial Call

Hello, thank you so much for calling me. As you know my name is Lauren and I am the one who will be conducting the interview for my research. First I would like to provide you with some information about why I am conducting this research. Throughout the U.S. there are many urban as well as rural areas where the amount of adequate nutritional food is hard to come by. In many instances people may live within a few blocks of fast food restaurants, but in order to get to a grocery store they may have to travel many miles. Because the healthier options are further away people have to rely on transportation, whether it be their own gas or paying to use public transit. Either way, it is harder for inner city as well as rural population to easily obtain nutritious options. This lack of nutritious food is often referred to as a food desert. This research study will be looking at the question of: what are the experiences and beliefs of people who live in poorer neighborhoods, on healthy food, and how it affects them? Do you have any questions for me, either about my research or about the interview in general?

Alright, well would you like to set up a time and place for us to meet and complete the interview? What days and times work best for you? Is there a certain place you would feel most comfortable with meeting? That sounds good and it works for me. There is nothing that you need to bring with you for the interview. I will see you on _____ at _____. Thank you for your time and I look forward to meeting you!

APPENDIX F

Resources

Blue Cross Blue Shield Prevention Minnesota : 1-800-760-0052

Minnesota Grown : 651-201-6648

The Minnesota Project : 651-645-6159

Minnesota Food Association : 651-433-3676

The University Of Minnesota Healthy Food Healthy Lives : 612-625-8693